HS PRINCIPAL COFFEE

HOSTED BY PTA

SINGAPORE AMERICAN SCHOOL

2022-23



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www.sas.edu.sg

SAS COMMUNITY NORMS

COMMUNITY NORMS

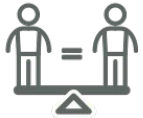
As an SAS community member I agree to hold myself to a high standard of personal conduct in my interactions and communications with students, faculty, and parents. This means I will adhere to the SAS Statement of Community by:



CONTRIBUTING PRODUCTIVELY AND POSITIVELY



ASSUMING POSITIVE INTENT



REFRAINING FROM DISCRIMINATION

(religious, ethnic, racial, sexual, or gender)



SHARING ACCURATE INFORMATION



GOING TO THE SOURCE

Questions to consider before posting:
1) Is it the truth?
2) Is it fair to all concerned?
3) Will it build better community and friendships?
4) Is it beneficial to all?

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Nicole Veltzé

High School Principal

Welcome to our October 2022 Coffee

GOOD PEOPLE TO KNOW



Nicole Veltzé
High School Principal



Laura Mohl
Deputy Principal for
Faculty & Staff



Anthony Poullard
Deputy Principal for
Grades 9 & 10



Lance Murgatroyd
Deputy Principal for
Grades 11 & 12



Julia Harrison
Associate Director of
Parent Engagement



Sarita Talwar
HS PTA Representative



Spradha Sinha
HS PTA Representative

PEOPLE YOU WILL HEAR FROM TODAY



Emily Leipold
HS Math Department Chair



Darlene Poluan
HS Math Specialist

STRATEGIC DIRECTION



2022-2023 PRIORITIZED AREAS OF GROWTH

#1 As a school, **strengthen relationships and foster an inclusive culture** based on our commitment to diversity, equity and inclusion.

#2 - Educators develop **greater expertise in using high quality, culturally responsive practices** to plan, teach, and assess.

#3 - Educators, students, and families are **prepared to transition to improved or new learning, work and community spaces**.

#4 - Educators **support students in the key social-emotional learning areas** identified by CASEL: self-awareness, self-management, social awareness, relationship skills, and responsible decision-making.

PRIORITY 2: DEVELOP HIGH QUALITY, CULTURALLY RESPONSIVE PRACTICES

*In the **high school**, we will:*

- *Increase understanding and consistency of high quality, culturally responsive instructional and assessment practices.*
- *Implement recommendations from our program reviews to strengthen our math, social studies, and humanities 9 classes*
- *Support PLC coaches to lead and coach their teams*

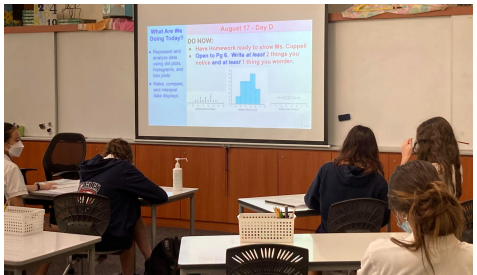


P-12 MATH REVIEW KEY RECOMMENDATIONS

- Schoolwide **math philosophy** of teaching and learning
- **Revise courses** to focus on depth, rather than breadth
- **PD** for faculty on **high-impact mathematics teaching**
- PD and systems for **classroom intervention**
- PD and further offerings for **extension**
- Adoption of a **common math curriculum resource**

TIMELINE FOR ALIGNMENT

- **High School Algebra 1** is implementing Illustrative Math aligned with Middle School Math 8+ in 2022-23 school year.
- **Other Course Recommendations:** *Final decision will be shared Oct 7*
  a. Geometry to implement Illustrative Math in 2023-24
  b. Algebra 2/Trig to implement Illustrative Math in 2024-25
- **2022-23** is the launch of:
  a. professional development learning on problem-based mathematics for all math teachers/courses
  b. 6-12 Math Pathway discussion



WHAT WE HEARD FROM YOU LAST MONTH

- Excitement about the **availability of math tutoring** in the high school all day and after school
- Ensure that math tutors are **part of HS team** and that they build positive **relationships** with students
- **Normalize** that getting math help is a good thing for all students at all levels
- **Math Pathways**: Need to work on placement, onboarding from other international math curriculum and clearer pathways that are transparent to all
- Offer **opportunities** for parents of student who will use the **IM curriculum** to learn more
- Provide more information on the **role of practice and homework** to support math learning

TODAY'S GOAL & AGENDA

Goal

To understand the what, the why, and the how of problem-based mathematics classrooms so that I can best support my child in building a positive mathematical identity as they engage in meaningful learning experiences.

Agenda

1. Experiencing problem-based learning through student lens
2. Defining and understanding the importance of problem-based learning experience
3. Creating strategies on how to best support students through problem-based learning

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Problem Based Mathematics

Darlene Poluan & Emily Leipold

INTRODUCTION

5:00

In your group, please share...

- Your name (and anything else you are willing to share about yourself)
- The reason you are here today



Diamond cards:

- What are you looking forward to learn from the session?



Spade cards:

- What insights and perspectives are you planning to bring to the session?

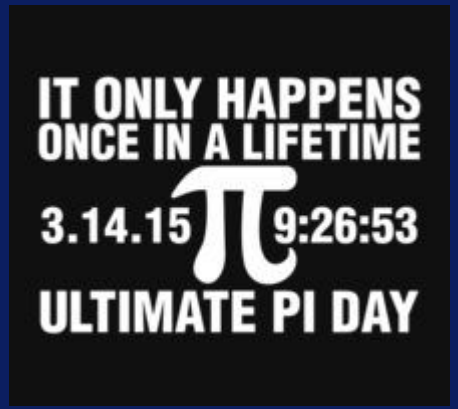


Heart cards:

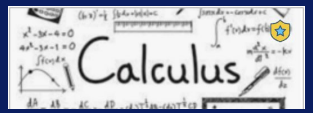
- How might you share your learning with others in your circle of influence?

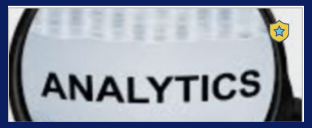
Darlene Poluan

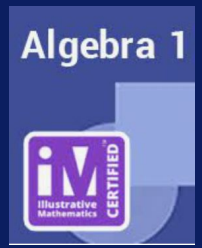












Emily Leipold







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BEFORE WE BEGIN



Please go to bit.ly/hsprincipalcoffee or scan the QR code to write your response to the following:

For me to feel like today's session has been useful or worthwhile or valuable,

- I need the facilitators to …
- I need my fellow participants to …
- I need myself to …

Note: we will start sharing with the whole group

what you wrote on the form at the end of the 3-minute mark.

QUESTIONS?

If you have questions anytime during the session, please go to bit.ly/hsmathquestions or scan the QR code on the poster next to the parking lot to submit your questions. You may also write your questions on a sticky note and post it on the parking lot paper.

We will try to answer them by the end of the session.

Questions?

MATERIALS

1. In the middle of the table:
    a. Pencils, sticky notes, extra paper
    b. Need extra materials? Let us know.
2. Each person will receive:
    a. Sample lesson from our Algebra 1 class
    b. SAS Schoolwide Math Philosophy
    c. How can I support my child's math learning?

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1. SAMPLE LESSON

Activity from Algebra 1
Unit 2 Day 7
Sept. 29 (A-day) and Sept. 30 (B-day)

LEARNING GOAL

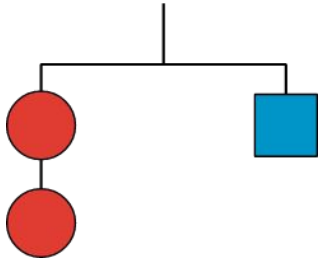
Let’s investigate how adding or subtracting equations can help us solve systems of linear equations.

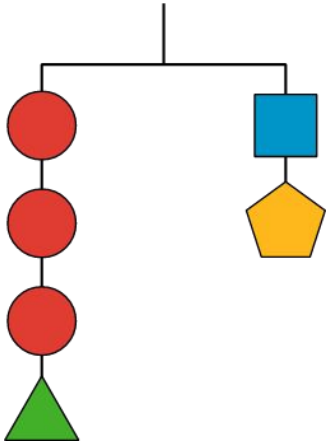
ACTIVITY 1 - NOTICE AND WONDER

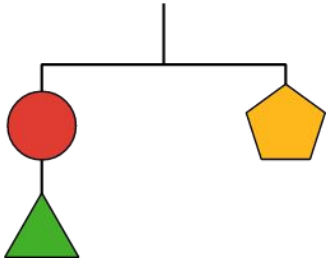
5:00

What do you notice and what do you wonder?

Be ready to share your answer with the whole group.







ACTIVITY 2.1 - ADDING EQUATIONS

5:00

Diego is solving this system of equations:

$$\begin{cases} 4x + 3y = 10 \\ -4x + 5y = 6 \end{cases}$$

Here is his work:

$$\begin{array}{r} 4x + 3y = 10 \\ -4x + 5y = \ \ 6 \quad + \\ \hline 0 + 8y = 16 \\ y = 2 \end{array}$$

$$\begin{aligned} 4x + 3(2) &= 10 \\ 4x + 6 &= 10 \\ 4x &= 4 \\ x &= 1 \end{aligned}$$

1. Make sense of Diego's work and discuss with **your [letter] partners**:
   a. What did Diego do to solve the system?
   b. Is the pair of *x* and *y* values that Diego found actually a solution to the system? How do you know?

ACTIVITY 2.2 - ADDING EQUATIONS



2. Does Diego's method work for solving these systems? Be prepared to explain or show your reasoning.

a. $\begin{cases} 2x + y = 4 \\ x - y = 11 \end{cases}$

b. $\begin{cases} 8x + 11y = 37 \\ 8x + y = 7 \end{cases}$

Reminder:

1. Make sure to check your solutions by substituting them back into the original equations.
2. If you finish early:
   a. How might you solve this problem using the substitution method that we learned in last class?
   b. Create a system of equations with solution (3,3) that you can solve by adding or subtracting.
   c. Ask the teacher for an "Are you ready for more?" problems.

ACTIVITY SYNTHESIS

Diego is solving this system of equations:

$$\begin{cases} 4x + 3y = 10 \\ -4x + 5y = 6 \end{cases}$$

Here is his work:

$$\begin{array}{r} 4x + 3y = 10 \\ -4x + 5y = \ \ 6 \quad + \\ \hline 0 + 8y = 16 \\ y = 2 \end{array}$$

$$\begin{aligned} 4x + 3(2) &= 10 \\ 4x + 6 &= 10 \\ 4x &= 4 \\ x &= 1 \end{aligned}$$

If we choose to add or subtract strategically, in each of the new equations, one variable is eliminated, making it possible to solve for the other variable. When the value of the variable is substituted into one of the original equations, we can solve for the variable that was eliminated. This method of solving is called **elimination**.

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2. PROBLEM-BASED LEARNING

What is it?

Why is it important?

PROBLEM-BASED RESEARCH EVIDENCE

CHARACTERISTICS

1. Learning is student centered.
2. Learning occurs in small student groups.
3. Teachers are facilitators or guides.
4. Problems form the original focus and stimulus for learning.
5. Problems are a vehicle for the development of problem solving skills.
6. New information is acquired through self-directed learning.

OUTCOME

- Increased **retention** of knowledge
- Enhanced **transfer** of concepts to new problems
- Enhanced intrinsic **interest** in the subject matter
- Encouraged self-directed learning skills (**metacognition**)

Barrows, H.S., & Tamblyn, R.M. (1980). *Problem-based learning*. New York: Springer.

Norman, G.R., & Schmidt, H.G. (1992, September). The psychological basis of problem-based learning: A review of the evidence. *Academic Medicine,* 67(9), pp. 557-565.

LEARNING MATHEMATICS - QUOTE

5:00

- Which word or phrase stood out to you from this quote? Why?
- How might this quote relate to your child's experience in learning mathematics so far?
- What support system would you provide to help your child "learn mathematics"?

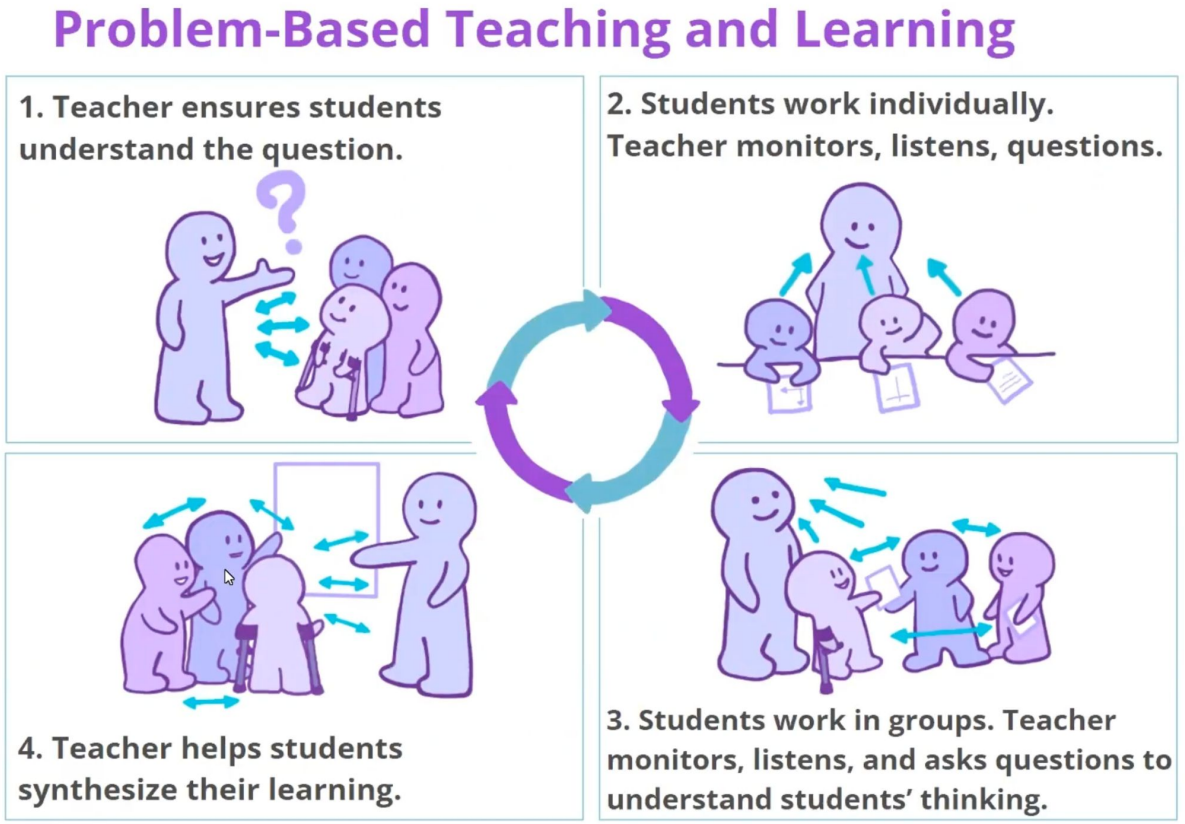
> **"Students learn mathematics as a result of solving problems. Mathematical ideas are the outcomes of the problem-solving experience rather than the elements that must be taught before problem solving."**

Hiebert, J., et. al. (1996). Problem solving as a basis for reform in curriculum and instruction: the case of mathematics. *Educational Researcher* 25(4), 12-21. doi.org/10.3102/0013189X025004012

PROBLEM-BASED LEARNING STRUCTURE

5:00

- What do you notice and what do you wonder?
- How might this structure be similar to or different from what you know about math classrooms?
- What does this structure mean for your child?



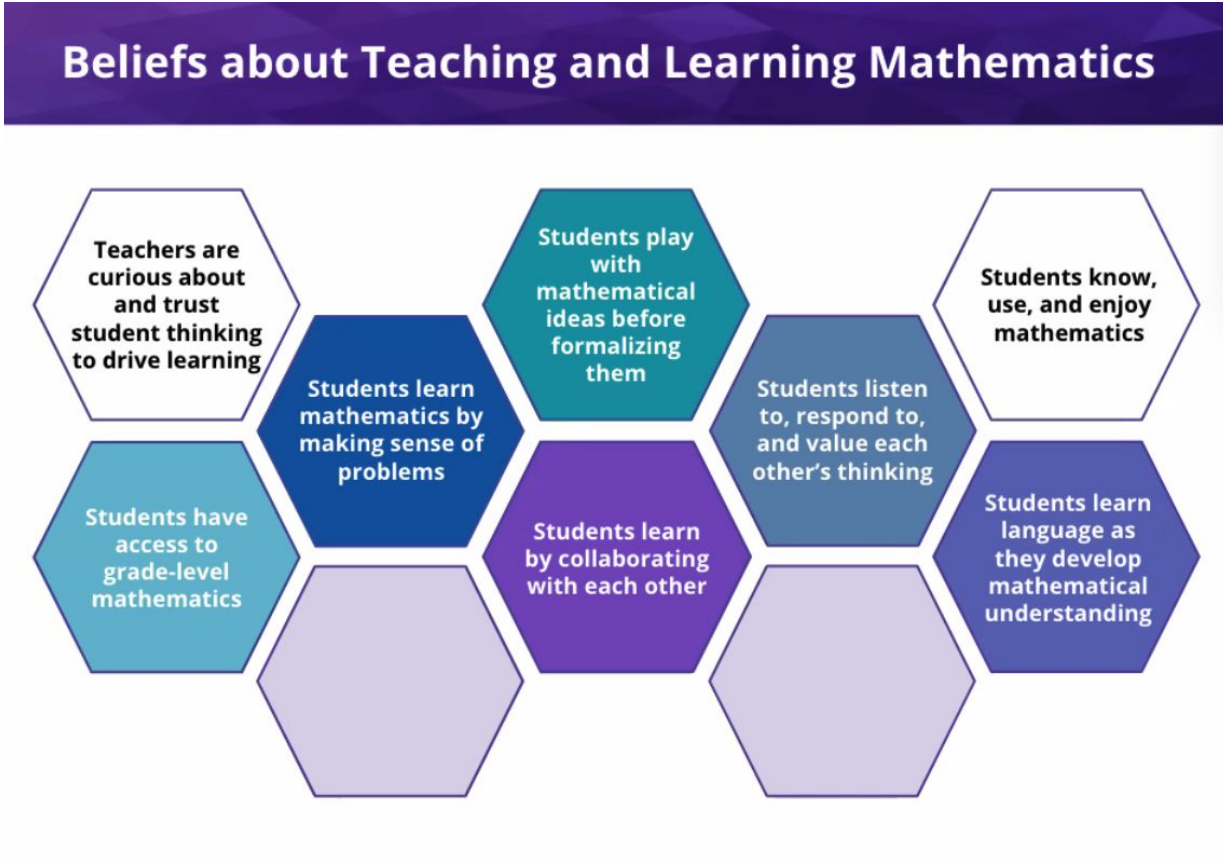
PROBLEM-BASED LEARNING BELIEFS

5:00

♠ Which one of these beliefs most resonate with you?

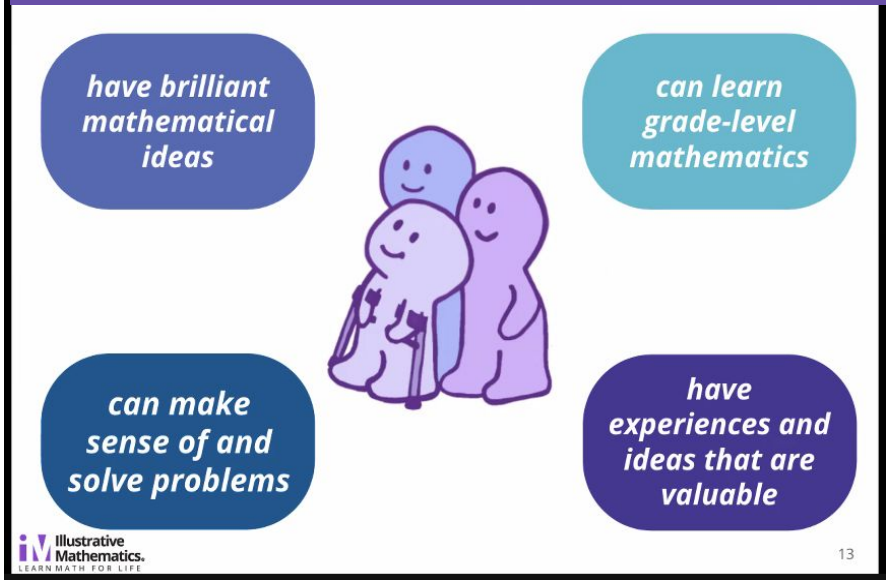
♥ Which one of these beliefs are you most curious about?

♦ Which one of these beliefs would you want your child to be a part of?

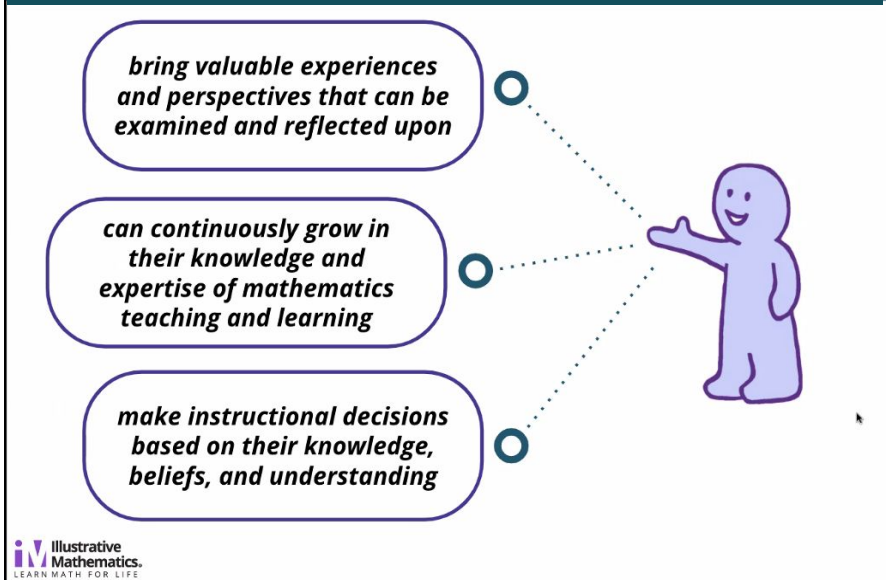


AT SAS, WE BELIEVE...

At SAS, we believe all students...



At SAS, we believe our teachers...



Ashwin: “You know, Mr. Son, I think I figured out what [math] is about now. You’re just making us think and reason through everything now.”

CONNECTING TO OUR MATH VISION & PHILOSOPHY

5:00

Please read the SAS ELC-12 Math Philosophy and Guiding Principles.

As you read, annotate where you see **how problem-based learning aligns to our philosophy and guiding principles**.

What further questions might you have regarding the document? Please submit them at bit.ly/hsmathquestions or write them on the sticky notes.

Singapore American School ELC-12 Math Philosophy and Guiding Principles for the 2027 Strategic Plan

Purpose of Document:

Vision

A World Leader in Education, Cultivating Exceptional Thinkers, Prepared for the Future

Mission

Singapore American School is committed to providing each student an exemplary American educational experience with an international perspective

Learning Aspirations



Character | Collaboration | Communication | Content Knowledge | Creativity | Critical Thinking | Cultural Competence

At Singapore American School, our mathematics program empowers students to develop agency and build positive mathematical identities by engaging in equitable, rigorous, and meaningful learning experiences.The following are our guiding principles for teaching and learning mathematics, with descriptors of how they may

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3. HOW DO I SUPPORT MY CHILD?

Strategies and Words of Encouragement

IF MY CHILD ...

has experiences and ideas that are valuable

has brilliant mathematical ideas

then what might I say to encourage my child at home when...

- they are stuck?
- they are not yet confident?
- they are ready for more challenge?

can make sense of and solve problems

can learn grade-level mathematics

click here for resources

HS MATH SUPPORT CENTER (TUTORING)

What is it?

- Math tutoring led by math experts on the **second floor of the library** to support all high school students during and after school

When is it?

- Monday to Friday from 7:30am to 4:30pm

Who can access it?

- Any student in any math class - Free

How can students access it?

- Drop-in, sign-up (HS bulletin), teacher referral, parent referral (please see eNews)

Our math tutors have..

- Wide range of experience and expertise in teaching or tutoring mathematics.
- Close working relationships with the math PLCs with feedback for teachers.
- A commitment to building strong relationships with students.
- Dedicated work time for ongoing professional development focused on effective instructional practices.

CLOSURE

1. What new insights and perspectives did you gain from the session?
2. What remaining questions do you have from the session?
3. How might you share your learning with others in your circle of influence?



UPCOMING OPPORTUNITIES

SINGAPORE AMERICAN SCHOOL

2022-23

UPCOMING PARENT EVENTS

Date	Grades	Host	Topic(s)
Friday, Oct 7	G9 - 12	PAC	PAC Parent Coffee: Teen Stress and Anxiety
Wednesday, Oct 12 - Friday, Oct 14	G9 - G12	HS	High School Student Learning Conferences
Tuesday, Oct 11	G12	PAC	PAC Parent Coffee: Letting Go for Senior Parents
Wednesday, Oct 26	G6-12	OOL	6-12 Math Pathways: Generating Questions for Future
Tuesday, Nov 1	G9 - G12	HS	Interim Parent Meeting
Friday, Nov 4	G9 - G12	PAC	PAC Parent Coffee: Teens and Sexuality
Monday, Nov 7	G9 - G12	HS PTA	HS Principal Coffee hosted by PTA

EXIT TICKET - FEEDBACK

What did you **like** about the session?

What do you **wish** would have been done differently?

What do you **wonder** about the session?

Share a word that you find interesting, useful,
valuable, fascinating, etc. from the session,
or share a word that captured the session today.

bit.ly/hspcfeedback



Thank you!

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Thank you!